AMEBIASIS
IN NEVADA, 2003-2012

April 2014
Edition 1.1

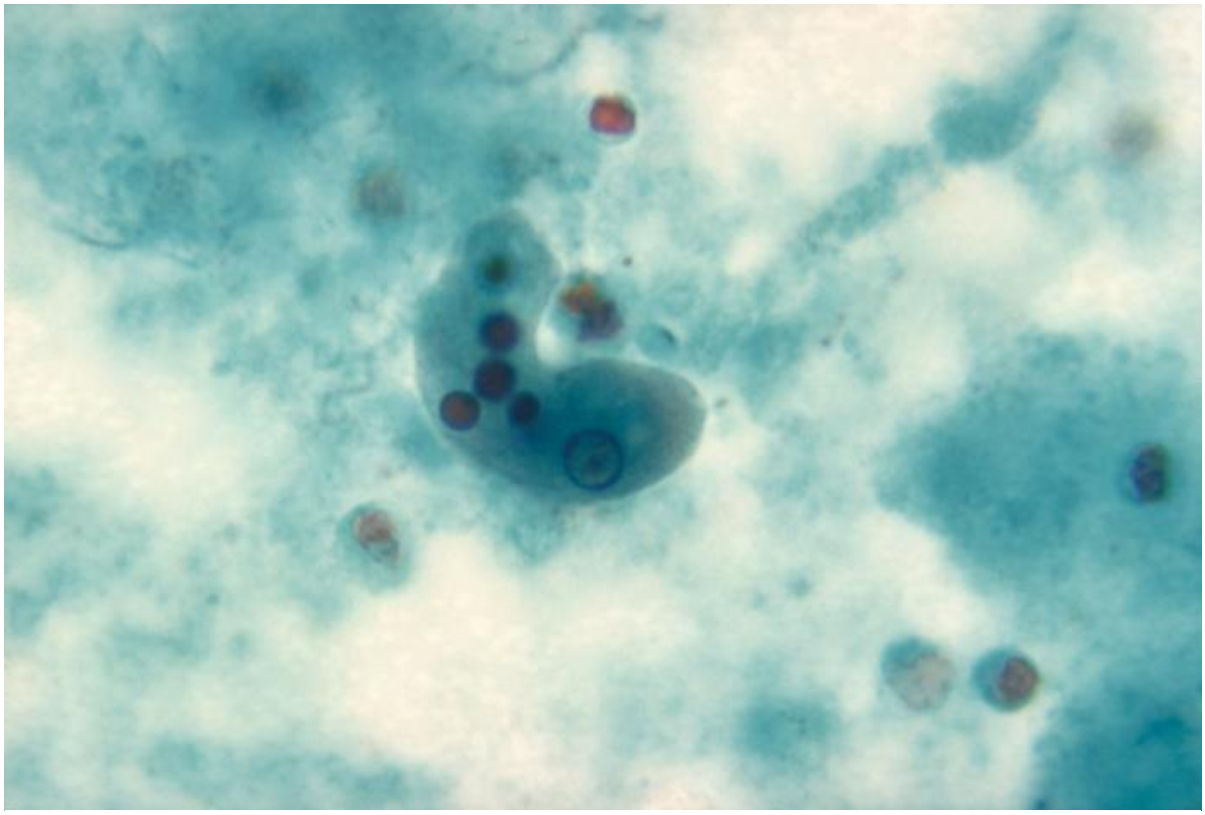

Photo: Centers for Disease Control and Prevention/ Dr. N.J. Wheeler, Jr.

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Purpose

The purpose of this report is to provide a general overview of the incidence and recent trends of amebiasis among Nevada residents. The report also includes Nevada data collected from cases of amebiasis from 2003 to 2012. Amebiasis is listed as one of Nevada's reportable diseases pursuant to NRS 441A (1). Amebiasis reporting is further regulated by NAC 441A.455 (2).

Amebiasis

Amebiasis is a disease caused by the parasite *Entamoeba histolytica (E histolytica)*. Amebiasis is typically found in tropical areas with poor sanitary conditions; Africa, Mexico, parts of South America, and India have significant health problems associated with amebiasis. In the United States, amebiasis is most commonly found in people who have traveled to tropical places with poor sanitary conditions, in immigrants from tropical countries with poor sanitary conditions, in people who live in institutions with poor sanitary conditions, and in men who have sex with men (3, 4).

E histolytica is spread through fecal-to-oral transmission, typically through food or water contaminated with stool. Individuals can become infected with *E histolytica* when putting anything in their mouth that has touched the feces of an infected person, swallowing something that is contaminated with *E histolytica*, or swallowing *E histolytica* cysts (eggs) picked up from contaminated surfaces or fingers. Most people who are infected with *E histolytica* do not have any symptoms; only 10 to 20 percent of those infected show symptoms. Symptoms occur 7 to 28 days after being exposed to the parasite. Patients with mild symptoms may exhibit diarrhea, stomach pain and cramping, fatigue, excessive gas, and rectal pain while having a bowel movement. Patients with severe symptoms may exhibit bloody stools, fever, vomiting, and abdominal tenderness. Rarely, infection may spread to the liver and form an abscess, or a collection of pus (3, 4).

If *E histolytica* infection is suspected, fecal samples are collected for laboratory testing. However, diagnosis of amebiasis can be difficult, because other parasites look similar to *E histolytica* (3). If diagnosed, amebiasis is typically treated with antibiotics. With treatment, the prognosis is usually good. Illness usually lasts two weeks but can return if treatment is not given (4).

To reduce the spread of infection, individuals with amebiasis should practice good personal hygiene, such as washing hands after using the toilet and before handling food. To reduce the chance of becoming infected when travelling to a tropical area with poor sanitation, individuals should not drink untreated water, fountain drinks, or drinks with ice cubes and should avoid consuming uncooked vegetables, unpeeled fruit, and unpasteurized dairy products. Bottled water, tap water that has been boiled for at least one minute, and beverages from sealed cans or bottles are safe to drink (3, 4).

Summary

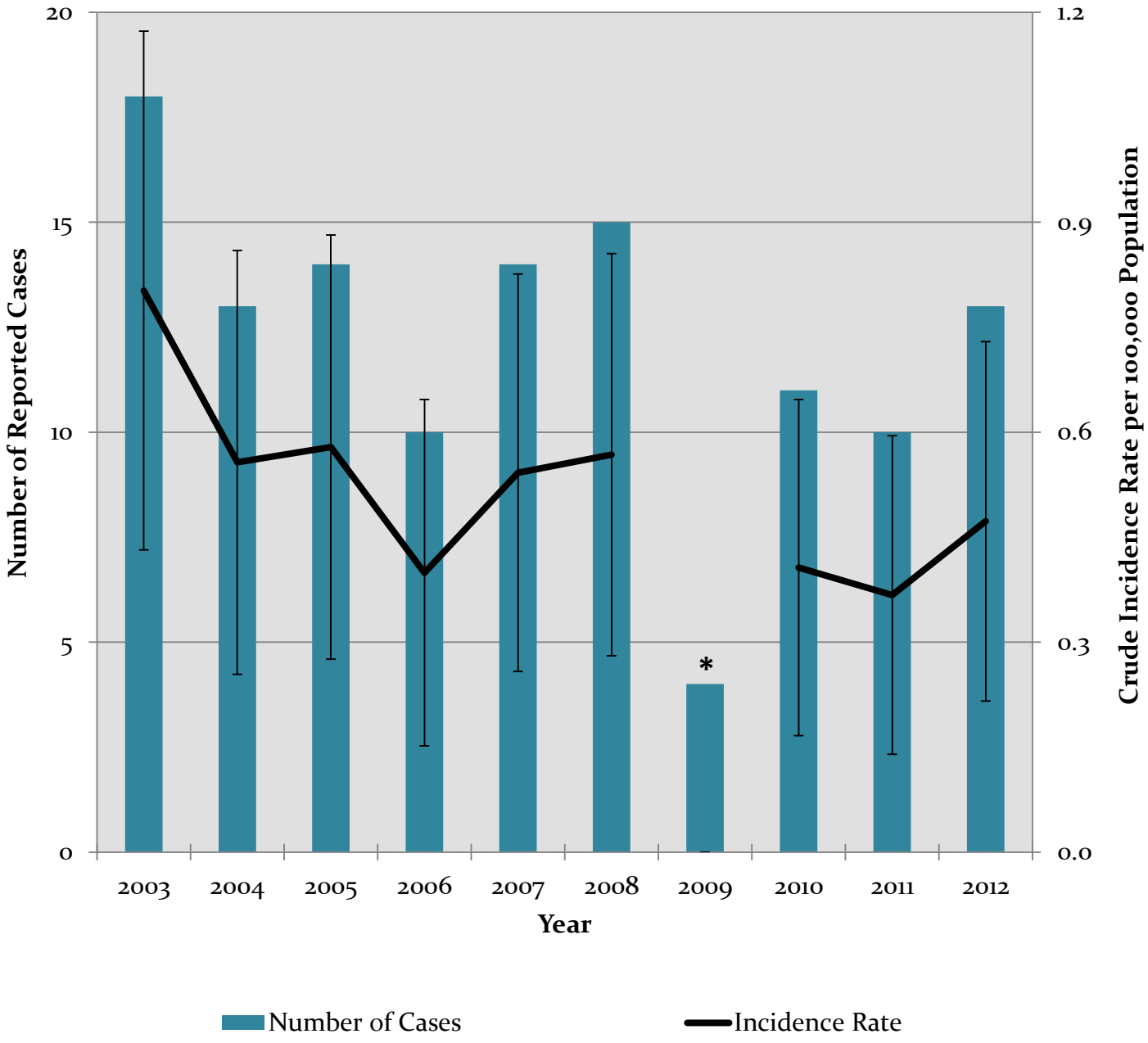
From 2003 to 2012, the annual number of reported amebiasis cases in Nevada ranged from a low of 4 cases in 2009 to a high of 18 cases in 2003. Over the ten years, a total of 122 cases were reported. The annual crude incidence of amebiasis ranged from a low of 0.4 cases per 100,000 population in 2006, 2010, and 2011 to a high of 0.8 cases per 100,000 population in 2003, but these differences were not statistically significant; the incidence rate for 2009 was not calculated due to low case counts. The crude incidence rate from 2003 to 2012 was 0.5 cases per 100,000 population. There are no Healthy People 2010 or Healthy People 2020 objectives for amebiasis.

Southern Nevada Health District had a significantly higher age-adjusted incidence rate (0.6 cases per 100,000 population) than Washoe County Health District (0.3 cases per 100,000 population), but the difference between southern Nevada and the overall age-adjusted incidence rate for the state was not significant. Rates for Carson City Health and Human Services and the rural and frontier counties were not calculated due to low case counts.

Between 2008 and 2012 (years for which monthly data is available), there was no discernable monthly or seasonal trend for reported amebiasis infections. The number of reported cases ranged between 0 and 4 cases per month, depending on the year.

The 25-39 year old age group had a significantly higher incidence rate (0.7 cases per 100,000 population) compared to the 15-24 year old age group (0.3 cases per 100,000 population), although it was not significantly higher than any other age group. There were no other significant differences between the other age groups. Rates for infants and children less than 5 years were not calculated due to low case counts.

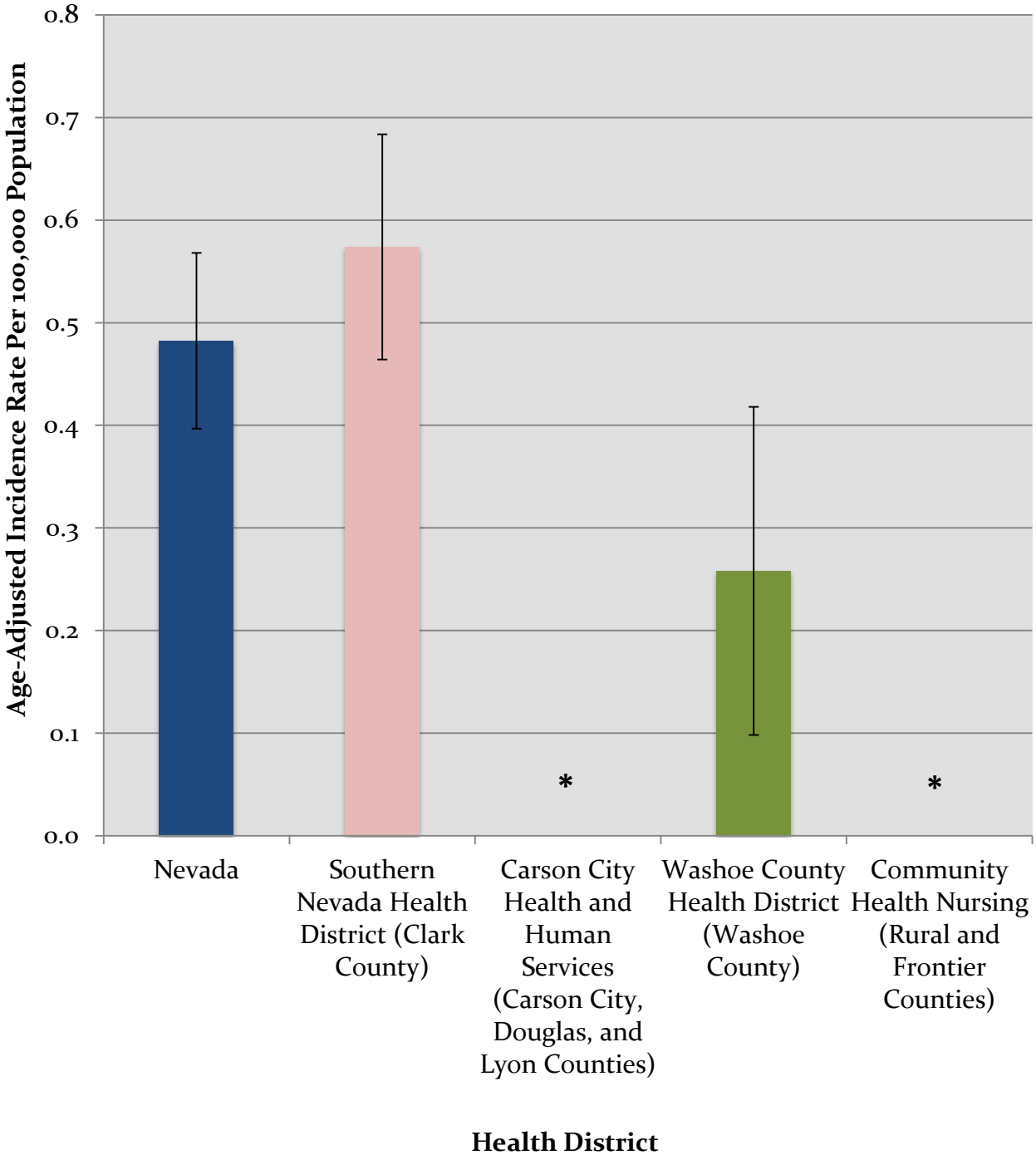
Figure 1. Number of Reported Cases and Crude Incidence Rates of Amebiasis in Nevada: 2003-2012



* Incidence rate not presented due to low case counts.

The crude incidence rate in Nevada from 2003 to 2012 was 0.5 cases per 100,000 population.

Figure 2. Age-Adjusted Incidence Rates of Amebiasis in Nevada and Nevada Health Districts: 2003-2012



* Data not presented due to low case counts.

Figure 3. Number of Amebiasis Cases Reported in Nevada by Month: 2008-2012

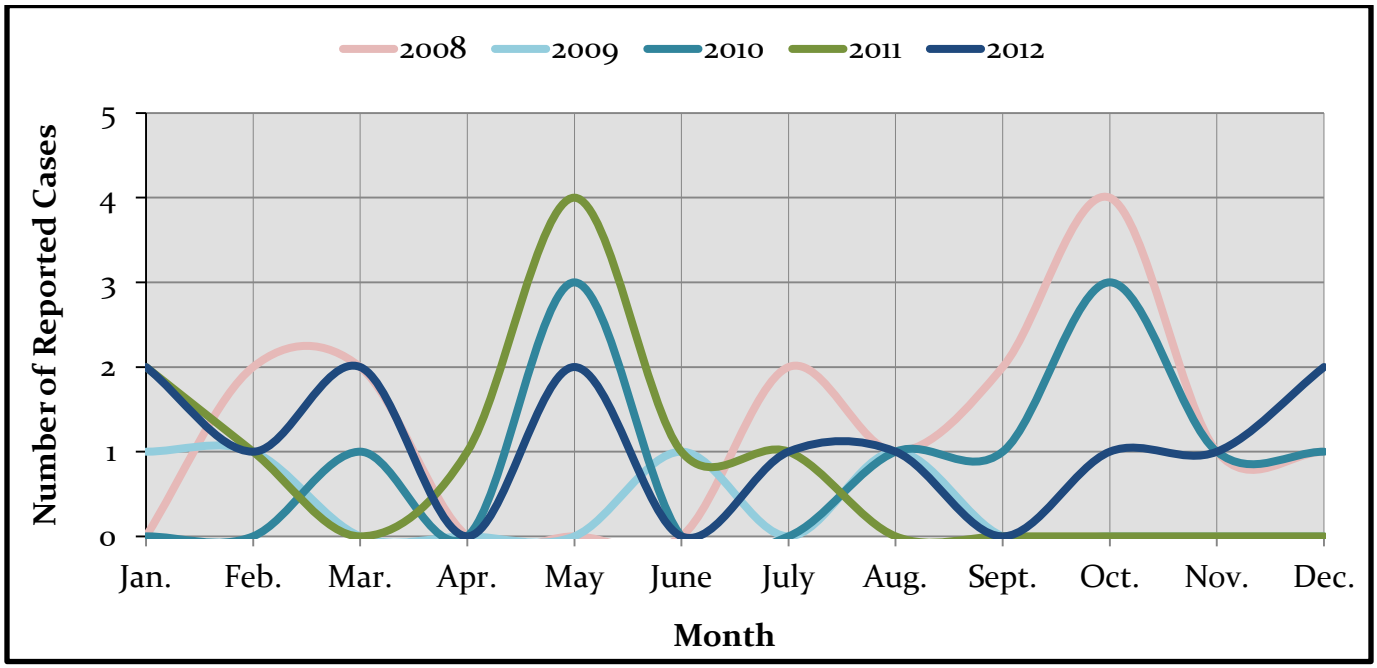
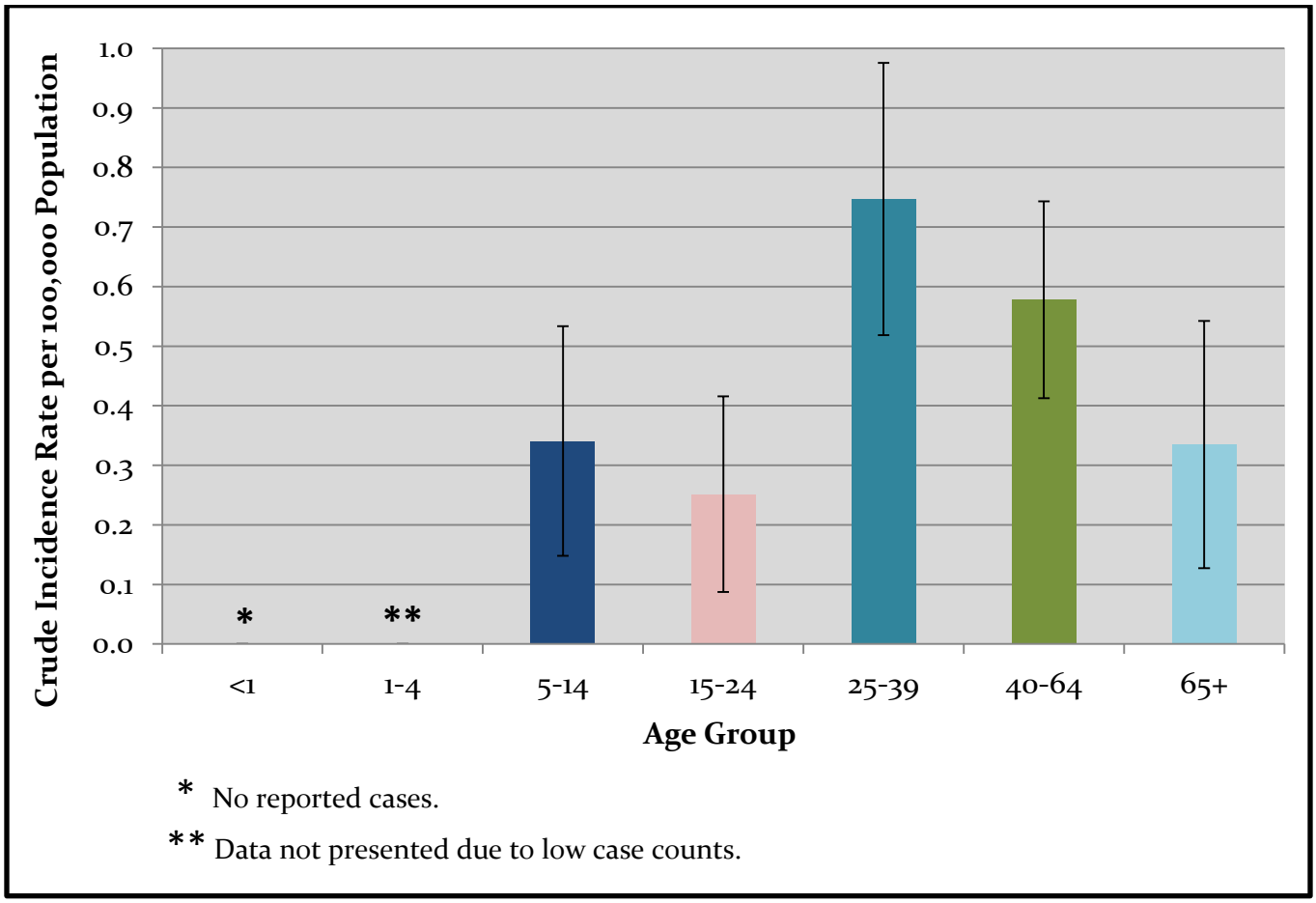


Figure 4. Crude Incidence Rates of Amebiasis in Nevada by Age Group: 2003-2012



* No reported cases.

** Data not presented due to low case counts.

Technical Notes

All Nevada data from 2003 to 2012 came from reported amebiasis infections among Nevada residents (5, 6). The CDC and Council of State and Territorial Epidemiologists case definition of amebiasis encompasses all cases classified as confirmed; all cases of amebiasis used for this report follow this definition (7). Population estimates were obtained from Nevada State Demographer's Office (8). Age-adjusted rates per 100,000 population were calculated using the 2000 U.S. standard population. Sufficient case counts were not available to obtain age-adjusted incidence rates for racial/ethnic groups; therefore, racial/ethnic distributions of incidence are not presented in this report. When used for rates, error bars represent 95% confidence intervals. The Keyfitz method was used to calculate confidence intervals of age-adjusted rates (9). Due to their inherent unreliability, rates were not calculated for case counts lower than five.

Sources

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Recommended Citation

Division of Public and Behavioral Health. Office of Public Health Informatics and Epidemiology. *Amebiasis in Nevada, 2003-2012.*Carson City, Nevada. April 2014. e 1.1.

Acknowledgements

Thank you to all persons who greatly contributed to this publication:
Jennifer Thompson; Jay Kvam, MSPH; Peter Dieringer; and Stephanie Tashiro, MPH

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This publication was supported by Cooperative Agreements 1U50OE000037-01 and 1U50CK000257-01 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.